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ABSTRACT

This paper briefly describes the development of a comprehensive dictionary of Holland occupational codes and other information for each of the 12,099 occupations defined in the government publication "Dictionary of Occupational Titles" (DOT). This classification was created by using 189 occupations with firmly established Holland classifications. Job analysis data from these construction-sample occupations were used together with multiple discriminant analysis to develop equations estimating the probability that an occupation belongs to one of the six Holland groups. These equations were successful in classifying 88 percent of the construction-sample occupations to the Holland category to which they belong. The comprehensive classification provides extensive coverage of moderate and low level occupations, and makes available extensive listings of Holland codes for occupations requiring little education, making it possible to apply the classification and Holland's theory in vocational assistance for poorly educated or hard-to-employ populations. A series of figures is included which shows the percentage and number of occupational titles in different categories of the classification; the percentage of low level occupations by classification; the mix of employment for men and women in 1960, 1970, and 1980, by classification, and the percentage of men and women employed in 1970 and 1980 in each classification requiring college preparation. The appendix shows employment and learning data for 503 occupations grouped by Holland category and level. (NRB)

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An Empirical Classification of Occupations Based on Job Analysis Data: Development and Applications

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Paper prepared for presentation at the meeting of the American Psychological Association, Toronto, August 1984. I am grateful for the technical assistance of Robert Kirchner.

An Empirical Classification of Occupations Based on Job Analysis Data: Development and Applications

Today I will describe the development of a comprehensive dictionary of Holland occupational codes and some anticipated new counseling, industrial, and research applications of the classification. The dictionary (Gottfredson, Holland, & Ogawa, 1982) lists Holland codes and other information for each of the 12,099 occupations defined in the Dictionary of Occupational Titles (U.S. Department of Labor, 1977), occupations ranging from abrasive grinder to zoologist. If you always wanted to know the Holland code for accordion tuner, poultry inseminator, and vamp creaser but did not know where to go for help, the dictionary is your source.

In the Artistic category, where counselors and their clients have sometimes complained that there are few occupations for a person to explore, the dictionary lists 149 occupations including cake decorator, tattoo artist, greeting card editor, and artist's model along with the more mundane screen writer, photographer, and editor. In all, the dictionary lists 570 occupations with "A" somewhere in the three-letter code.

Development

The Employment and Training Division of the Department of Labor conducted an extensive job analysis program (U.S. Department of Labor, 1972; Miller, Treiman, Cain, & Roos, 1980) that resulted in successive editions of the Dictionary of Occupational Titles and supplements to that dictionary. The aim was to analyze all occupations in the U.S. economy. This aim appears not to have been fully attained; coverage of highly structured production jobs seems more complete than coverage of less-structured occupations in large organizations and of various specialized professional occupations (cf. Miller, Treiman, Cain, & Roos, 1980).

Job analysts rated occupations on three worker functions (data, people, and things); educational development required in reasoning, mathematics, and language; specific vocational preparation required; 11 aptitudes; 10 temperaments; 5 interests; 6 physical demands; and 7 environmental conditions. These ratings have useful but imperfect levels of reliability (Cain & Green, 1980), show some evidence of construct validity (G. D. Gottfredson, 1982), and show no evidence that "women's work" is underrated relative to "men's work" (Miller et al., pp. 188-191).

To create the comprehensive classification, we used 189 occupations with firmly established Holland classifications. Job analysis data for these construction-sample occupations

were used together with multiple discriminant analysis to develop equations estimating the probability that an occupation belongs to one of the six groups. These equations were successful in classifying 88% of the construction-sample occupations to the Holland category to which they belonged (kappa = .85). These same equations agreed with a classification based on the pooled judgment of myself and John Holland 77.4% of the time in a cross-validation sample (kappa = .47). Establishing the judges' lack of first-hand knowledge of many of the occupations in question would be an easy task, so the cross-validation results may be regarded as a lower bound estimate of the validity of the empirical classification.

The major departure of the empirical classification based on the job analysis data and our judgmental classification was that the equations classified some of the occupations we thought were Realistic in the Conventional category. We now assume we were acting in error on the simple stereotype, "If it involves machines, it is probably an R."

Further details of our methods and of the evidence of the construct validity of the comprehensive classification is provided elsewhere (G. D. Gottfredson et al., 1982).

Some Characteristics of the Classification

A sense for the contents of the comprehensive classification can be gained by examining Figure 1, which shows the percentage and number of occupational titles in different categories of the classification. As expected the vast majority of titles are in Realistic subcategories. This reflects in part the manufacturing and production emphasis of our economy, and it reflects in part the over representation of production jobs in the sampling of jobs performed by the Department of Labor in its job analysis program (Miller et al., 1980).

Insert Figure 1 About Here

A useful feature of the comprehensive classification is its extensive coverage of moderate and low level occupations. Three-fourths of the employment in our economy does not require college-level preparation, as is illustrated by Figure 2. Of the occupational titles listed in the dictionary, 39% are at GED levels one or two, 52% are at GED levels three and four, and 9% are at GED levels five and six--requiring at least some college.

Insert Figure 2 About Here

Applying the Classification to Revise Some Earlier Results

Several years ago, I used the occupational classification summarized by Holland's (1973) Occupations Finder and employment data from the 1960 and 1970 censuses to describe the composition of the U.S. labor force in psychological terms (G. D. Gottfredson & Daiger, 1977). The empirical classification based on job analysis data can be used to construct a parallel portrait using the 1980 census data. That portrait is shown in Table 1.[1]

Insert Table 1 About Here

In general the picture of labor force composition shown in Table 1 resembles the earlier results based on 1960 and 1970 census data. This resemblance is reassuring, because the present results are based on a revised and more detailed census classification of occupations and on a new empirical classification derived from job analysis data.

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1. To classify the 1980 census data on occupations, two raters independently used Census Bureau (1980) and Department of Labor (1974) documents together with the Dictionary of Holland Occupational Codes to assign three-letter codes to each of the 503 detailed occupational titles in the census classification. The two raters agreed on the primary category for 84% of the occupations (kappa = .77). In the vast majority of cases, disagreements involved transpositions of letters in the three-letter code. Discrepancies were resolved by discussion and re-examination of source documents to arrive at the final classification on which the present results are based. The occupational codes used for each of the 503 occupations are listed in Appendix A.

Although differences in the way the Census Bureau has collected occupational data and differences in the ways Holland codes were assigned to the data obscure interpretations somewhat, Figures 3 and 4 illustrate the mix of employment for men and women in 1960, 1970, and 1980. These figures suggest a relative decrease of about 11% in Realistic employment, and some increases in the relative proportions of Social and Enterprising work. These shifts probably correspond to a decline in farming and production portions of our economy and a rise in service components of the economy.

Insert Figures 3 and 4 About Here

The distribution of employment across Holland categories differs at different levels of work. Accordingly, Figure 5 shows the percentage of men and women employed in each type of work for occupations requiring some college preparation (i.e., at GED levels 5 and 6) in 1970 and 1980. Each bar in Figure 5 shows the percentage of the sex group employed in each type of work in the respective years.

The Classification of Low Level Occupations

The comprehensive classification makes available for the first time extensive listings of Holland codes for occupations requiring little education. For example, about four pages of CRS occupations at GED level 2 are listed--ranging

from Acetylene-Cylinder-Packing Mixer and Adding Machine Operator through Wrong-Address Clerk and X-Ray Inspector. Most of these occupations require little Specific Vocational Preparation (usually three months or less). These extensive listings should make it possible to apply the classification and Holland's theory in vocational assistance for poorly educated or hard-to-employ populations.

Earlier research (G. D. Gottfredson & Lipstein, 1975) with one difficult population (urban parolees and probationers) suggested that employment in occupations that is consistent in terms of the theory (e.g., RC and CR occupations) may lead to greater employment stability for such persons. The comprehensive classification should make it easier to locate large numbers of consistent occupations even for persons at low levels of educational development.

The listing of occupations in Appendix A shows the numbers of persons employed in each of the detailed occupations in the census classification by Holland category and GED level.[2] Because most job openings are created by replacement, the number of persons currently employed in an occupation provides a rough index of the likely number of openings in that occupation. Consistent occupations employing large numbers of persons at low GED levels may be good targets for

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2. The employment data in Appendix A are taken from tabulations by the U.S. Bureau of the Census (1983).

vocational assistance programs for hard-to-employ populations.

Discussion

The comprehensive empirical classification of occupations is, of course, no better than the job analysis data on which it is based. The job analyses underlying the Department of Labor data are no longer state-of-the art (Miller et al., 1980). Nevertheless, the comprehensive classification is the first classification for use with Holland's typology based entirely on job analysis data, and it does appear to correspond well with earlier versions of the occupational classification. In addition it produces descriptions of the work force that resemble descriptions developed earlier using different methods.

The research potential of the comprehensive classification has not yet been widely explored. In our earlier discussion of the classification (G. D. Gottfredson, Holland, & Ogawa, 1981) we encouraged researchers and practitioners to explore applications of the classification in broadening the occupational search, helping disadvantaged clients, researching labor market behavior, and studying validity generalization.

The application and evaluation of the integration of the comprehensive classification with job search methods like

Azrin & Besalel's (1980) Job Club seems especially important. The Job Club method is a demonstrably effective program (Azrin, Philip, Thienes-Hontos, & Besalel, 1980, 1981) that makes use of resources such as telephone yellow pages to develop job leads. One part of the method is to regard job seeking as a full-time job, and this requires that job leads continuously be developed. But the Job Club method currently ignores the match between job-seekers and jobs, as well as the consistency of occupational environments. The comprehensive classification should stimulate the identification of large numbers of congruent and consistent occupational possibilities. A task for both researchers and practitioners is to build on previous developments to evolve more effective interventions. Elsewhere (G. D. Gottfredson, in press; G. D. Gottfredson, Rickert, G. D. Gottfredson, and Advani, in press) I have suggested a method counselors can use to guide their research in developing more effective interventions through careful intervention program planning and evaluation. The application of this method in exploring new uses of the comprehensive classification would be useful.

A second area where further exploration of the classification has potential is in research on validity generalization for constructing robust and widely applicable selection methods for entire categories of occupations. Because the comprehensive classification is based on job analysis data,

it should have promise in grouping together occupations with similar patterns of validity coefficients across a variety of selection tests. For example, a single selection battery should show comparable levels of validity for all occupations classified as RCE at GED level 4. Research examining this possibility is required.

References

Azrin, N. H., & Besalel, V. A. (1980). Job club counselor's manual: A behavioral approach to vocational counseling. Baltimore: University Park Press.

Azrin, N. H., Philip, R. A., Thienes-Hontos, P., & Besalel, V. A. (1980). Comparative evaluation of the Job Club program with welfare recipients. Journal of Vocational Behavior, 16, 133-135.

Azrin, N. H., Philip, R. A., Thienes-Hontos, P., & Besalel, V. A. (1981). Follow-up on welfare benefits received by Job Club welfare clients. Journal of Vocational Behavior, 18, 253-254.

Cain, P. S., & Green, B. F., Jr. (1980). The rating of DOT worker functions and worker traits. In A. R. Miller, D. J. Treiman, P. S. Cain, & P. A. Roos (Eds.), Work, jobs, and occupations: A critical review of the Dictionary of Occupational Titles. Washington, DC: National Academy Press.

Gottfredson, G. D. (1982). An assessment of a mobility-based occupational classification for placement and counseling. Journal of Vocational Behavior, 21, 71-98.

Gottfredson, G. D. (In press). A theory-ridden approach to program evaluation: A method for stimulating researcher-implementer collaboration. American Psychologist.

Gottfredson, G. D., & Daiger, D. C. (1977). Using a classification of occupations to describe age, sex, and time differences in employment patterns. Journal of Vocational Behavior, 10, 121-138.

Gottfredson, G. D., Holland, J. L., & Gottfredson, L. S. (1975). The relation of vocational aspirations and assessments to employment reality. Journal of Vocational Behavior, 7, 135-148.

Gottfredson, G. D., Holland, J. L., & Ogawa, D. K. (1982). The dictionary of Holland occupational codes. Palo Alto, CA: Consulting Psychologists Press.

Gottfredson, G. D., & Lipstein, D. J. (1975). Using personal characteristics to predict parolee and probationer employment stability. Journal of Applied Psychology, 60, 644-648.

Gottfredson, G. D., Rickert, D. E., Gottfredson, D. C., & Advani, N. (In press). Standards for Program Development Evaluation plans. Psychological Documents.

Holland, J. L. (1973). Making vocational choices: A theory of careers. Englewood Cliffs, NJ: Prentice Hall.

Miller, A. R., Treiman, D. J., Cain, P. S., & Roos, P. A. (Eds.). (1980). Work, jobs, and occupations: A critical review of the Dictionary of Occupational Titles. Washington, DC: National Academy Press.

U.S. Bureau of the Census. (1980). 1980 census of population: [illegible]fied index of industries and occupations. Washin[illegible] DC: U.S. Government Printing Office.

U.S. Bureau [illegible]he Census. (1983). 1980 census of population: Detailed occupation and years of school completed by age, for the civilian labor force by sex, race, and Spanish origin: 1980 (Supplementary report PC80-S1-8). Washington, DC: U.S. Government Printing Office.

U.S. Department of Labor. (1972) Handbook for analyzing jobs. Washington, DC: U.S. Government Printing Office.

U.S. Department of Labor. (1977). Dictionary of occupational titles (Fourth edition). Washington, DC: U.S. Government Printing Office.

Figure 1

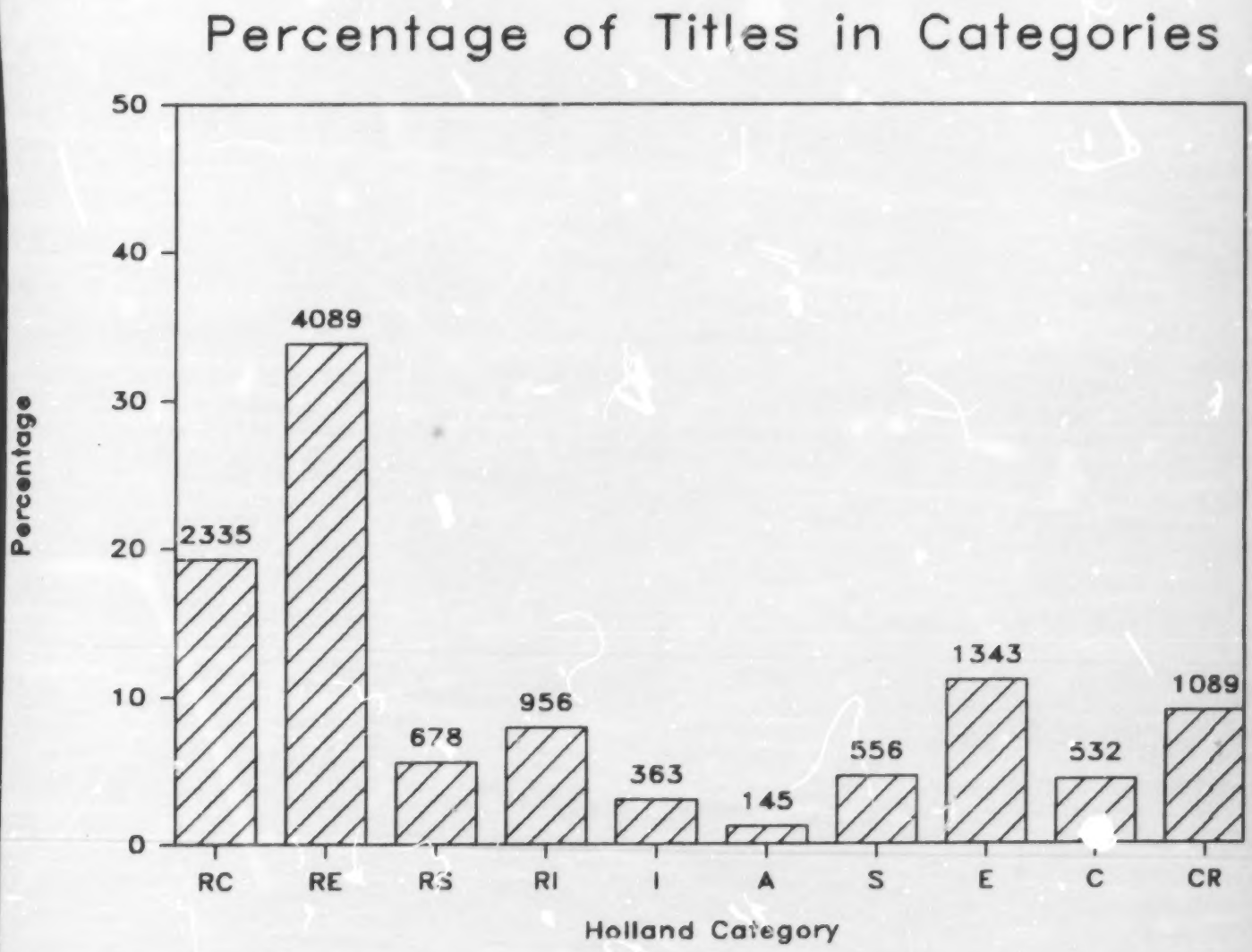
Percentage of Titles in Categories
Percentage
50
40
30
20
10
0
2335
4089
678
956
363
145
556
1343
532
1089
RC
RE
RS
RI
I
A
S
E
C
CR
Holland Category

Figure 2

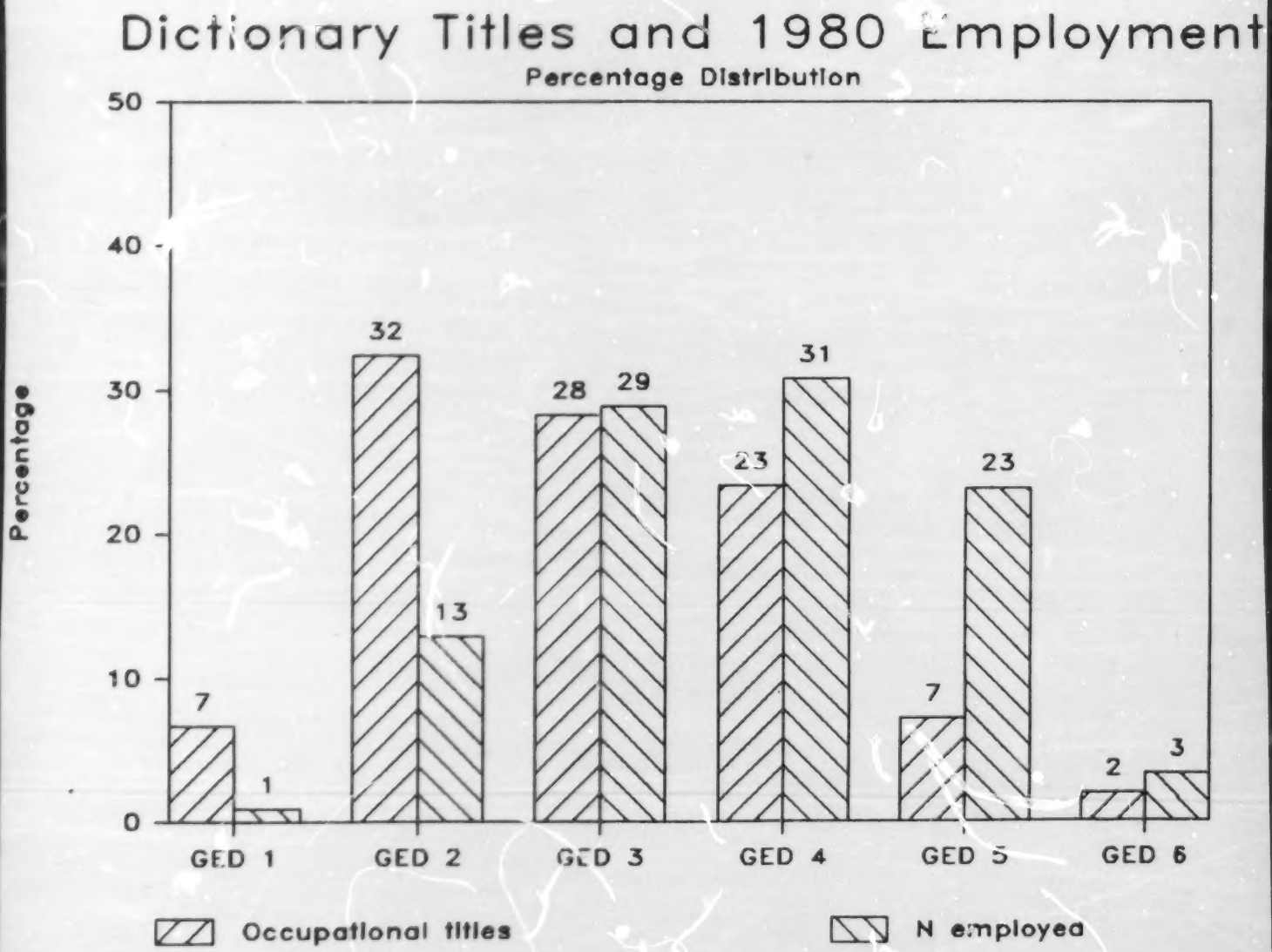
Dictionary Titles and 1980 Employment
Percentage Distribution
Percentage
50
40
30
20
10
0
7
1
32
13
28
29
23
31
7
23
2
3
GED 1
GED 2
GED 3
GED 4
GED 5
GED 6
Occupational titles
N employed

Figure 3

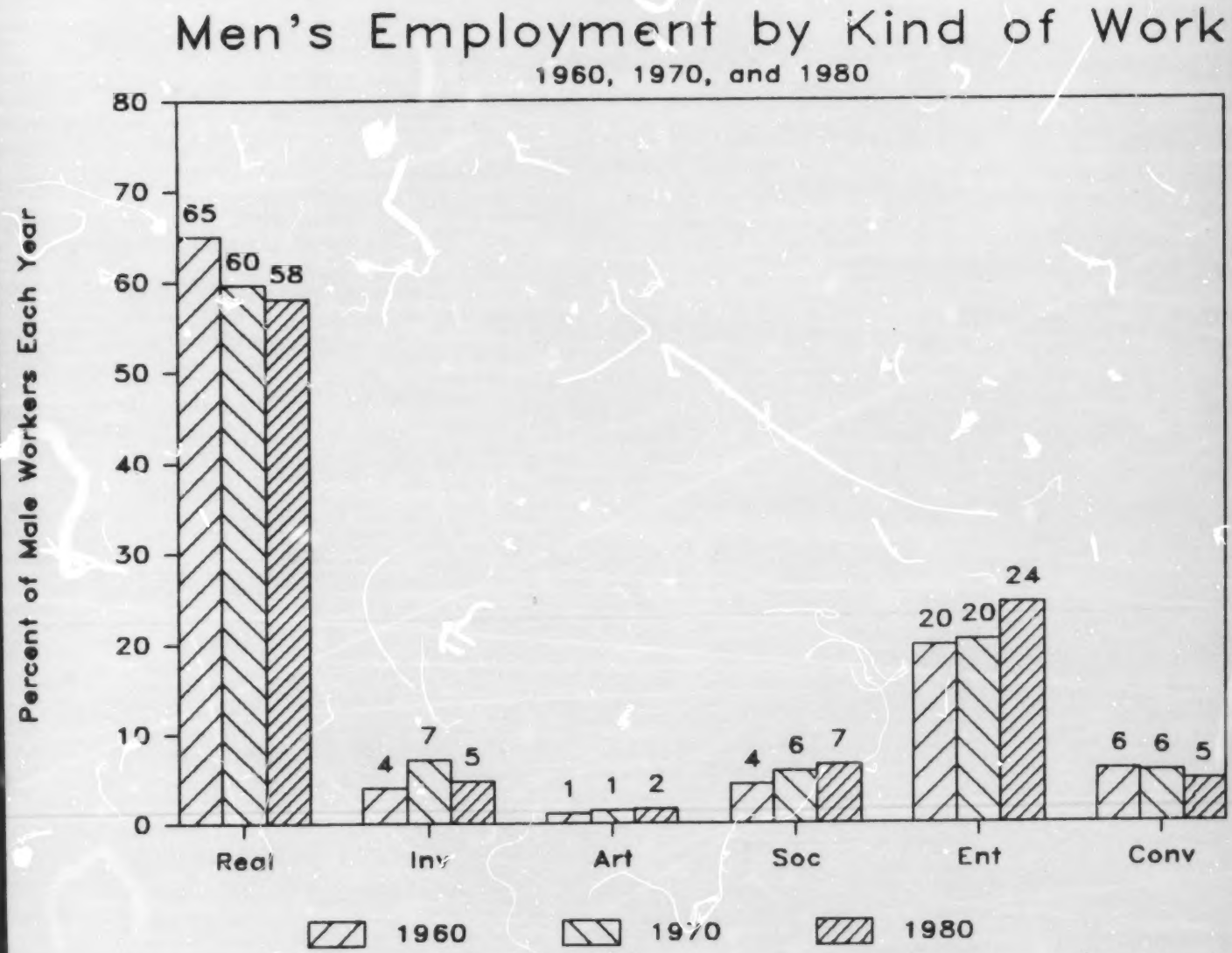
Men's Employment by Kind of Work
1960, 1970, and 1980
Percent of Male Workers Each Year
80
70
60
50
40
30
20
10
0
65
60
58
4
7
5
1
1
2
4
6
7
20
20
24
6
6
5
Real
Inv
Art
Soc
Ent
Conv
1960
1970
1980

Figure 4

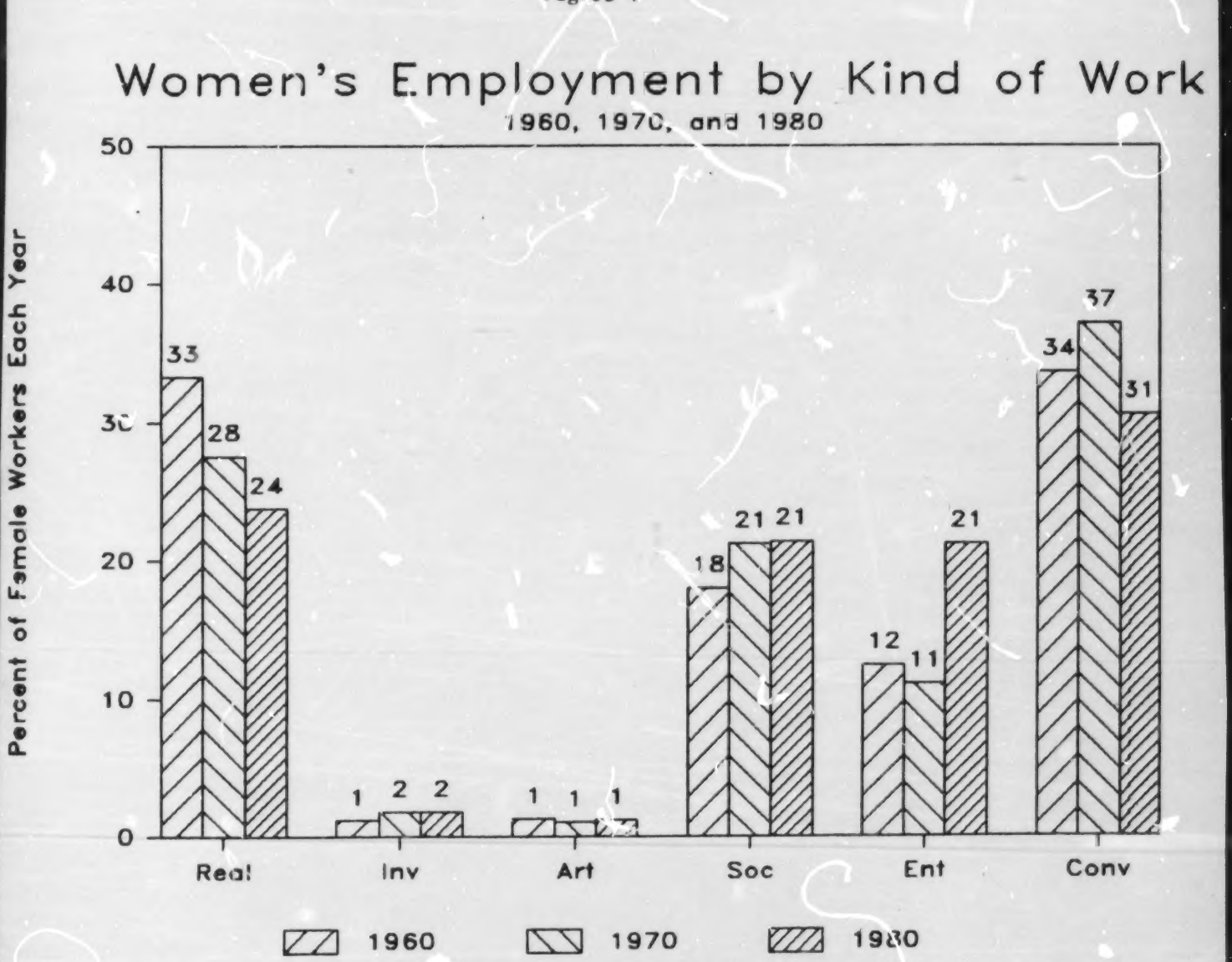
Women's Employment by Kind of Work
1960, 1970, and 1980
Percent of Female Workers Each Year
50
40
30
20
10
0
33
28
24
1
2
2
1
1
1
18
21
21
12
11
21
34
37
31
Real
Inv
Art
Soc
Ent
Conv
1960
1970
1980

Figure 5

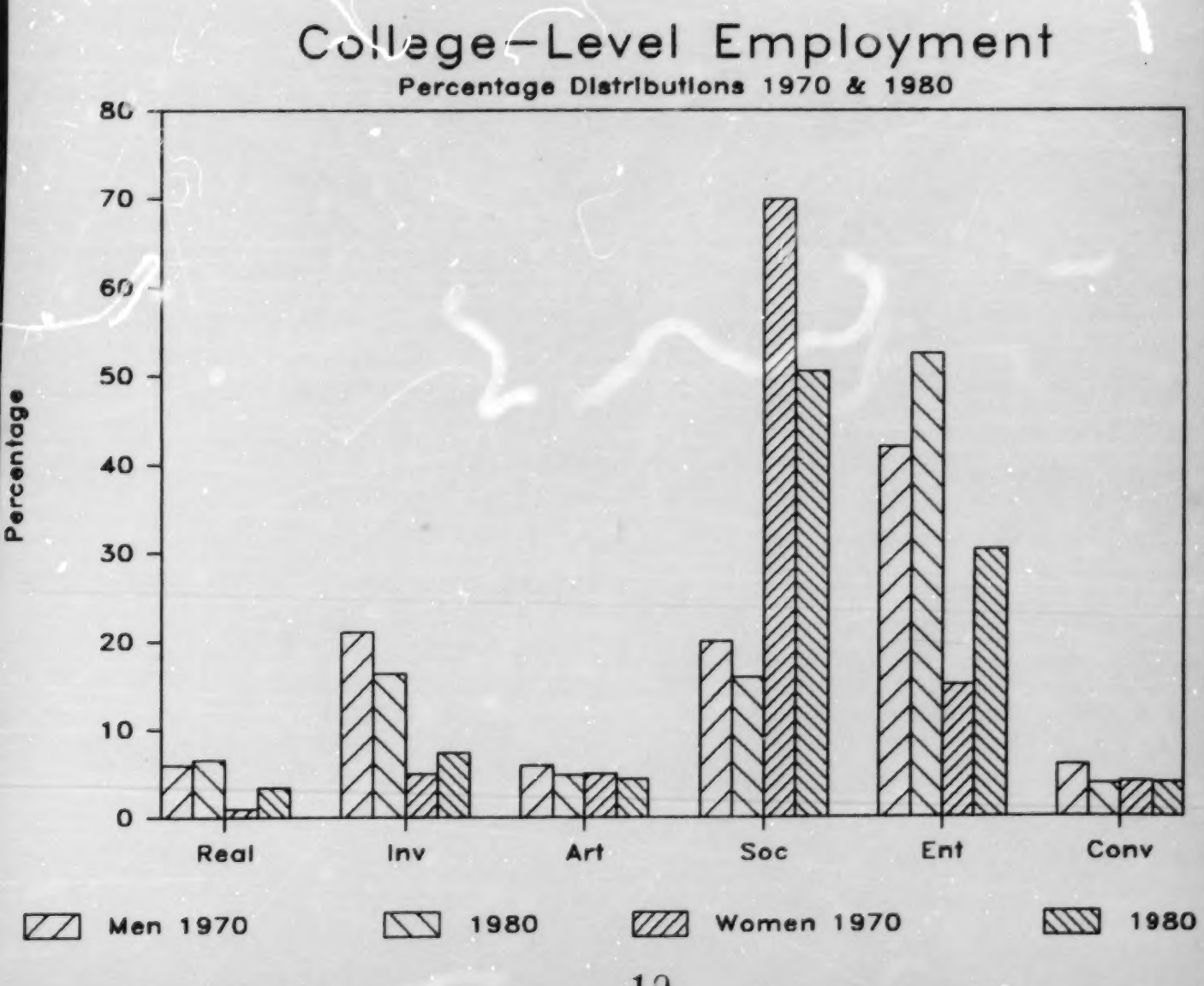
College-Level Employment
Percentage Distributions 1970 & 1980
Percentage
80
70
60
50
40
30
20
10
0
Real
Inv
Art
Soc
Ent
Conv
Men 1970
1980
Women 1970
1980

Table 1

Kind and Level of Work Done by Men and Women Aged 16 and Above in 1980

(Thousands)

Kind of Work	General Educational Development Level					
	1	2	3	4	5	6
Men						
Realistic	369	8214	11767	13154	1039	73
Investigative	--	--	--	--	1273	1501
Artistic	--	--	6	106	528	292
Social	--	22	611	607	2351	342
Enterprising	--	321	1815	3524	8421	505
Conventional	--	259	1201	684	636	--
Women						
Realistic	553	4082	4536	982	350	77
Investigative	--	--	--	--	412	467
Artistic	--	--	1	43	431	37
Social	--	16	2068	2018	5103	243
Enterprising	--	384	2113	3634	3115	100
Conventional	--	103	5792	7190	411	--

Note. Based on a reclassification of detailed occupational data from the 1980 census of population.

Appendix A

Employment and Earnings Data for 503 Occupations Grouped by Holland Category and Level

The following pages show occupations arranged by the first two letters of their Holland category and by General Educational Development (GED) level. Several other pieces of information about the occupations are also shown: (a) Specific Vocational Preparation (SVP), an estimate of the amount of time required to become proficient in the occupation; (b) the number of persons employed in the occupation according to the 1980 census of population; and (c) the mean earnings of persons employed in the occupation in 1970 according to the 1980 census.

The three-letter Holland codes for these occupations were derived by using the Dictionary of Holland Occupational Codes to classify the 503 occupational categories used in the 1980 census, and the GED and SVP estimates were obtained by consulting U.S. Department of Labor sources.

In general, an occupation at GED levels 5 or 6 requires some college preparation, an occupation at GED levels 3 or 4 requires high school preparation, and an occupation at GED levels 1 or 2 requires some elementary school preparation.

SVP ratings estimate the vocational training, however acquired, required for proficiency in the occupation. The SVP ratings are interpreted as follows: 1 = short demonstration only, 2 = up to 30 days, 3 = one to three months; 4 = up to six months; 5 = half a year to a year; 6 = one to two years; 7 = two to four years; 8 = four to ten years; 9 = over ten years.

Because most occupational openings occur through turnover or replacement rather than growth, the relative number of people employed in various occupations provides a rough indicator of the likely openings in an occupation. Other things being equal, occupations that employed more people according to the 1980 census will have more openings than occupations that employed fewer people.

Occupations also tend to maintain their rank order in terms of the income earned by people who work in them. The listing shows the mean earnings of men and women employed in each occupation during 1979.

Note that this is not the income of year-round full-time workers in these occupations. Steady work is characterisitc of some occupations, and sporadic work characterizes others. For example, male bartenders who worked in 1979 had mean earnings of $8,452, but male bartenders who worked year-round full-time in 1979 had mean earnings of $11,346. For some occupations (e.g., physician) work is relatively steady and the differences between the earnings of full-time year-round workers and the earnings of persons employed in the occupation during the year are relatively inconsequential. For other occupations (e.g., brickmasons, truckdrivers, and construction helpers) the differences are substantial. Because part-time work is a fact of life in some occupations, the income data shown seem more realistic than data for full-time year-round workers. In addition, for most occupations it is an unfortunate fact that women are paid less on average than are men. Men's earnings are usually somewhat higher and women's earnings somewhat lower than the average earnings shown in the listing. Furthermore, the income data are necessarily out-of-date because earnings increase over time due to inflation. Nevertheless, these data provide a reasonable picture of the relative economic payoffs of different occupations.

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Realistic-Investigative Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Geologists and geodesists	RIE	6	8	46127	26145
Metallurgical and materials engineers	RIE	6	8	24539	25212
Engineering teachers, college and univ.	RIS	6	[illegible]	10972	20013
Technicians, n.e.c.	RIS	5	7	338002	14776
Electrical and electronic engineers	RIE	5	8	322874	24220
Engineering technicians, n.e.c.	RIE	5	7	272034	15840
Airplane pilots and navigators	RIE	5	6	76188	35830
Technical writers	RIS	5	7	49596	17250
Dental laboratory and medical appliance technicians	RIS	5	7	48746	13350
Petroleum engineers	RIE	5	8	23054	29828
Farmers, except horticultural	RIE	4	7	1144703	12611
Machinists	RIE	4	[illegible]	526154	15339
Plumbers, pipefitters, and steamfitters	RIE	4	7	489644	16729
Electrical and electronic technicians	RIE	4	7	266184	16246
Telephone installers and repairers	RIE	4	7	256579	19852
Operating engineers	RIS	4	6	238826	15561
Automobile body and related repairers	RIE	4	7	207822	12707
Tool and die makers	RIE	4	7	186010	19345
Electronic repairers, communications and industrial equip.	RIE	4	7	165321	13686
Heavy equipment mechanics	RIE	4	7	158588	16677
Drywall installers	RIS	4	7	97300	12626
Cabinet makers and bench carpenters	RIS	4	6	76836	11266
Lathe and turning machine set-up operators	RIE	4	7	55932	15672
Miscellaneous plant and system operators	RIE	4	6	52765	17614
Miscellaneous electrical and electronic equip. repairers	RIE	4	7	32589	15282
Photoengravers and lithographers	RIE	4	8	26017	16995
Heat treating equipment operators	RIE	4	7	24923	17042
Precision assemblers, metal	RIE	4	7	23661	14024
Lay-out workers	RIE	4	7	22903	14334
Elevator installers and repairers	RIS	4	7	20772	20587
Pattern makers and model makers	RIE	4	7	20419	18847
Miscellaneous metal and plastic processing mach. operators	RIE	4	6	15611	11929
Motion picture projectionists	RIE	4	6	14445	11189
Horticultural specialty farmers	RIE	4	7	13845	12243
Plumber, pipefitter, and steamfitter apprentices	RIE	4	7	12360	10904
Patternmakers, lay-out workers, and cutters	RIE	4	8	9390	14830
Machinist apprentices	RIE	4	7	8219	11516
Tool and die maker apprentices	RIE	4	7	7880	13162
Miscellaneous precision wood workers	RIE	4	6	5047	12805
Patternmakers and model makers, wood	RIE	4	8	4590	21116
Hand engraving and printing operations	RIE	4	8	2142	11673
Truck drivers, light	RIE	3	3	550160	11908
Painting and paint spraying machine operators	RIE	3	5	171138	11816
Mining machine operators	RIE	3	4	93214	16763
Household appliance and power tool repairers	RIE	3	3	82774	13148

Realistic-Investigative Occupations (Cont'd)

Title	Code	GED	SVP	N Employed	Mean earnings
Drillers, oil well	RIS	3	4	74264	15455
Misc. metal, plastic, stone, and glass working mach. opers.	RIE	3	3	33517	16755
Stevedores	RIS	3	5	22002	17749
Forging machine operators	RIE	3	5	15891	15453
Shaping and joining machine operators, woodworking	RIC	3	5	9382	9539
Wood lathe, routing, and planing machine operators	RIE	3	4	8178	12109
Machine operators, not specified	RIE	2	3	1404212	11524
Milling and planing machine operators	RIE	2	3	21699	14655

Realistic-Social Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Podiatrists	RSI	5	7	7781	33678
Automobile mechanics	RSE	4	7	960383	12710
Telephone line installers and repairers	RSE	4	7	62606	18726
Farm equipment mechanics	RSE	4	7	45908	12359
Paperhangers	RSE	4	7	17235	12242
Automobile mechanic apprentices	RSE	4	7	4130	10774
Truck drivers, heavy	RSE	3	4	1896525	15402
Painters, construction and maintenance	RSE	3	7	422470	10796
Butchers and meat cutters	RSE	3	6	294446	13363
Brickmasons and stonemasons	RSI	3	8	205245	12800
Bakers	RSE	3	6	116970	9541
Excavating and loading machine operators	RSC	3	5	82918	15317
Glaziers	RSE	3	7	33540	13642
Shoe repairers	RSE	3	7	31594	8558
Precision grinders, fitters, and tool sharpeners	RSC	3	6	19769	16764
Private household cleaners and servants	RSE	2	2	383888	3346
Animal caretakers, except farm	RSC	2	4	71472	6658
Food batchmakers	RSE	2	2	27104	8952
Cooks, private household	RSE	2	3	11821	4806
Explosives workers	RSE	2	3	11002	15210

Realistic-Enterprising Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Managers, horticultural specialty farms	RES	5	8	15646	10227
Mining engineers	REI	5	8	10041	25206
Supervisors, production occupations	RES	4	7	1888059	19036
Carpenters	REI	4	7	1295891	12067
Welders and cutters	REI	4	5	791028	14368
Supervisors, n.e.c.	RES	4	7	684672	21258
Electricians	REI	4	7	606952	17740
Industrial machinery repairers	RES	4	7	487183	15752
Specified mechanics and repairers, n.e.c.	REI	4	7	309699	14240
Engineers, n.e.c.	RES	4	8	248038	24713
Firefighting occupations	RES	4	5	193092	17589
Supervisors, mechanics and repairers	RES	4	8	161930	20095
Bus, truck, and stationary engine mechanics	REI	4	7	153990	15214
Construction trades, n.e.c.	RES	4	7	146756	11585
Millwrights	RES	4	7	134076	19963
Stationary engineers	REI	4	7	133390	19005
Sheet metal workers	REI	4	7	131353	15805
Electrical power installers and repairers	REI	4	7	104863	18996
Aircraft engine mechanic	RES	4	7	97322	18973
Supervisors, extractive occupations	REI	4	8	82625	26075
Concrete and terrazzo finishers	REI	4	7	75354	12478
Locomotive operating occupations	RES	4	7	73098	23835
Tailors	REI	4	8	62025	9189
Production testers	REC	4	6	58992	13518
Supervisors, farm workers	RES	4	7	53790	13673
Construction inspectors	REC	4	6	50892	16026
Data processing equipment repairers	RES	4	7	47261	18310
Machinery maintenance occupations	RES	4	7	47112	15870
Metal plating machine operators	REC	4	7	43867	12105
Camera, watch, and musical instrument repairers	REC	4	8	40566	12217
Precious stones and metals workers (jewelers)	RES	4	7	37972	11070
Supervisors, electricians and power transmission installers	RES	4	7	37006	24102
Supervisors, carpenters and related workers	RES	4	8	35805	18706
Sheetmetal duct installers	REC	4	7	29022	15465
Plasterers	RES	4	7	28900	13094
Power plant operators	RES	4	8	27750	19515
Locksmiths and safe repairers	REI	4	6	19327	12444
Electrician apprentices	REI	4	7	18861	11287
Supervisors, plumbers, pipefitters, and steamfitters	RES	4	8	17485	23650
Aircraft mechanics, except engine	REI	4	7	15542	17594
Engravers, metal	REC	4	8	15347	11326
Carpenter apprentices	REI	4	7	9977	8648
Mail preparing and paper handling machine operators	REC	4	5	7499	8187
Captains and other officers, fishing vessels	RES	4	7	7134	18972
Supervisors, brickmasons, stonemasons, and tile setters	RES	4	6	5048	19389
Apparel and fabric patternmakers	RES	4	7	4197	11678
Brickmason and stonemason apprentices	RES	4	8	3277	9395

Realistic-Enterprising Occupations (Cont'd)

Title	Code	GED	SVP	N Employed	Mean earnings
Miscellaneous precision metal workers	REI	4	7	2394	13595
Inspectors, agricultural products	REI	4	7	1143	10803
Sheet metal workers apprentices	REI	4	7	737	13482
Janitors and cleaners	RES	3	3	2130157	8516
Cooks, exc. short order	RES	3	5	1350198	5791
Farmworkers	RES	3	4	887098	6491
Miscellaneous food preparation occupations	REC	3	3	715082	4159
Stock and inventory clerks	REI	3	4	609882	10611
Bus drivers	REI	3	5	386334	8999
Garage and service station related occupations	RES	3	5	341675	6982
Miscellaneous material moving equipment operators	REI	3	4	215737	12579
Not specified mechanics and repairers	RES	3	6	215678	15096
Taxi cab drivers and chauffeurs	REI	3	3	188593	9428
Molding and casting machine operators	REC	3	6	158277	11330
Furnace, kiln, and oven operators, exc. food	RES	3	5	153795	16141
Heating, air conditioning, and refrigeration mechanics	RES	3	6	151695	14760
Roofers	REC	3	7	127408	10332
Photographic process machine operators	RES	3	3	91043	9484
Structural metal workers	REI	3	7	89231	16106
Carpet installers	REI	3	7	87827	12693
Railroad brake, signal, and switch operators	REI	3	4	82919	19726
Grader, dozer, and scraper operators	REC	3	5	80580	14142
Insulation workers	REC	3	6	57064	13403
Mining occupations, n.e.c.	RES	3	4	52482	16645
Optical goods workers	REC	3	5	46872	11935
Office machine repairers	RES	3	6	38996	14261
Pest control operators	REI	3	5	37588	11108
Boilermakers	RES	3	7	37209	18244
Hand molders and shapers, except jewelers	REI	3	3	37123	12060
Small engine repairers	REC	3	6	36344	10137
Fabricating machine operators, n.e.c.	REC	3	3	35232	11892
Nursery workers	REI	3	3	33736	6236
Water and sewage plant operators	REI	3	4	33295	13687
Bookbinders	RES	3	7	30828	10219
Mechanical controls and valve repairers	REC	3	6	28322	14996
Drillers, earth	RES	3	4	24010	13755
Supervisors, related agricultural occupations	RES	3	6	20952	13584
Hand molding, casting, and forming occupations	REI	3	3	18325	9367
Textile cutting machine operators	REC	3	4	9280	8478
Miscellaneous precision apparel and fabric workers	RES	3	7	8996	8541
Paving, surfacing, and tamping equipment operators	RES	3	5	7560	11637
Numerical control machine operators	REI	3	5	2801	17007
Hunters and trappers	RES	3	5	2184	13528
Marine life cultivation workers	RES	3	5	1333	7525
Laborers, except construction	RES	2	2	1400358	9973
Construction laborers	RES	2	4	861223	10120

Realistic-Enterprising Occupations (Cont'd)

Title	Code	GED	SVP	N Employed	Mean earnings
Stock handlers and baggers	REC	2	3	709348	7378
Miscellaneous machine operators, n.e.c.	REC	2	3	698686	12074
Hand packers and packagers	REC	2	2	622759	8163
Freight, stock, and material movers, hand, n.e.c.	RES	2	2	473400	11530
Grinding, abrading, buffing, and polishing machine operators	REC	2	2	279847	12552
Laundering and dry cleaning machine operators	RES	2	3	187045	6991
Vehicle washers and equipment cleaners	REC	2	2	147901	8241
Helpers, construction trades	RES	2	2	126152	7844
Packaging and filling machine operators	REC	2	2	121142	9675
Production helpers	RES	2	2	120983	10346
Timber cutting and logging occupations	RES	2	4	113720	10957
Mixing and blending maching operators	REC	2	2	111596	12811
Winding and twisting machine operators	REC	2	2	111412	8358
Separating, filtering, and clarifying machine operators	REC	2	2	72554	16988
Fishers	REI	2	4	54700	13145
Sailors and deckhands	REI	2	4	34230	13943
Helpers, mechanics and repairers	RES	2	2	28077	9066
Forestry workers, except logging	REI	2	2	28053	8619
Extruding and forming machine operators	RES	2	3	25096	12332
Compressing and compacting machine operators	REI	2	2	22618	10703
Elevator operators	REC	2	2	21982	10359
Rolling machine operators	REC	2	2	19721	18682
Washing, cleaning, and pickling machine operators	REC	2	3	9285	12034
Maids and housemen	REC	1	2	673558	5748
Machine feeders and offbearers	REC	1	2	112641	10171
Garbage collectors	RES	1	1	76577	10404
Crushing and grinding machine operators	REI	1	2	52578	12864
Roasting and baking machine operators, food	REC	1	2	7222	12843

Realistic-Conventional Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Health technologists and technicians, n.e.c.	RCS	5	7	152539	10555
Broadcast equipment operators	RCE	5	6	72722	11860
Attendants, amusement and recreation facilities	RCS	4	3	104923	7438
Typesetters and compositors	RCS	4	8	70515	11501
Biological technicians	RCS	4	7	46404	12557
Miscellaneous printing machine operators	RCS	4	7	46366	10340
Tile setters, hard and soft	RCS	4	7	32538	13766
Correspondence clerks	RCE	4	6	19744	11121
Rail vehicle operators, n.e.c.	RCE	4	5	9229	18387

Realistic-Conventional Occupations (Cont'd)

Title	Code	GED	SVP	N Employed	Mean earnings
Textile sewing machine operators	RCE	3	4	914472	6214
Production inspectors, checkers, and examiners	RCE	3	5	723618	12452
Traffic, shipping, and receiving clerks	RCE	3	4	513400	10911
Industrial truck and tractor equipment operators	RCE	3	4	435412	12978
Inspectors and compliance officers, exc. construction	RCE	3	5	156844	17260
Electrical and electronic equipment assemblers	RCE	3	6	112538	8774
Sawing machine operators, woodworking	RCE	3	4	108367	9791
Dressmakers	RCE	3	7	103959	5819
Short-order cooks	RCE	3	3	80742	4847
Upholsterers	RCS	3	5	68895	9787
Drilling and boring machine operators	RCE	3	5	67006	13341
Miscellaneous precision workers, n.e.c.	RCE	3	6	41845	12355
Solderers and brazers	RCE	3	5	33926	8190
Hoist and winch operators	RCS	3	4	31889	15384
Miscellaneous woodworking machine operators	RCI	3	4	31301	9889
Miscellaneous hand working operations	RCE	3	3	25257	9275
Helpers, surveyor	RCS	3	4	11086	8878
Bridge, lock, and lighthouse tenders	RCE	3	4	5187	13638
Longshore equipment operators	RCS	3	4	4265	19448
Motor transportation occupations, n.e.c.	RCE	3	3	3647	12154
Samplers	RCE	3	4	2668	11142
Assemblers	RCE	2	3	1699700	10371
Groundskeepers and gardeners, except farm	RCE	2	3	412615	7875
Printing machine operators	RCS	2	2	299501	13346
Waiter / waitress assistants	RCS	2	2	293209	3901
Splicing and cutting machine operators	RCE	2	2	210693	10475
Punching and stamping press machine operators	RCE	2	3	177326	12137
Miscellaneous textile machine operators	RCE	2	3	151204	8850
Lathe and turning machine operators	RCE	2	3	119598	14768
Graders and sorters, except agriculture	RCS	2	3	113218	7508
Pressing machine operators	RCE	2	3	107287	6356
Kitchen workers, food preparation	RCS	2	2	106609	5109
Shoe machine operators	RCE	2	2	76445	6676
Knitting, looping, taping, and weaving machine operators	RCS	2	3	74897	8764
Cementing and gluing machine operators	RCE	2	2	36536	9660
Folding machine operators	RCE	2	2	33745	8423
Helpers, extractive occupations	RCS	2	2	21682	13135
Duplicating machine operators	RCE	2	4	19780	8316
Adjusters and calibrators	RCE	2	4	3674	9654
Hand grinding and polishing operations	RCE	2	2	2858	10172
Launderers and ironers	RCE	2	2	2301	5023

Investigative-Realistic Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Physicians	IRS	6	8	433255	53028
Dentists	IRS	6	8	125291	43232
Chemists, except biochemists	IRE	6	8	102239	20631
Aerospace engineers	IRS	6	8	88491	26948
Operations and systems researchers and analysts	IRE	6	7	80876	21632
Chemical engineers	IRE	6	8	57502	26875
Biological and life scientists	IRE	6	8	46079	17122
Forestry and conservation scientists	IRS	6	8	35567	15915
Agricultural and food scientists	IRS	6	8	24589	15891
Physicists and astronomers	IRE	6	8	22413	26993
Medical scientists	IRE	6	8	20065	29903
Marine engineers and naval architects	IRE	6	8	16682	25897
Nuclear engineers	IRE	6	8	9240	25826
Physical scientists, n.e.c.	IRE	6	8	8641	20022
Marine engineers	IRE	6	8	3759	16202
Drafting occupations	IRE	5	7	329467	14460
Clinical laboratory technologists and technicians	IRE	5	6	243982	11518
Mechanical engineers	IRE	5	8	197650	24657
Chemical technicians	IRS	5	7	73423	16435
Science technicians, n.e.c.	IRS	5	7	73033	12647
Surveying and mapping technicians	IRE	5	7	53094	13004
Veterinarians	IRS	5	8	34355	29155
Surveyors and mapping scientists	IRE	5	7	31634	15880
Physician's assistants	IRS	5	7	30437	12133
Statisticians	IRE	5	7	30200	17502
Optometrists	IRS	5	7	24605	31227
Health diagnosing practitioners, n.e.c.	IRS	5	7	21539	28707
Mechanical engineering technicians	IRE	5	7	15592	19851
Industrial engineering technicians	IRE	5	7	10644	16349
Tool programmers, numerical control	IRE	5	8	8575	17848
Atmospheric and space scientists	IRS	5	7	8415	20758
Agricultural engineer	IRE	5	8	4505	24475

Investigative-Artistic Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Archivists and curators	IAS	5	8	15302	13148
Examples:					
Art conservator					
Coin collector					
Museum director					
Museum technician					
Music librarian					

Investigative-Artistic Occupations (Cont'd)

Title	Code	GED	SVP	N Employed	Mean earnings
Philatelist / Stamp collector					

Investigative-Social Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Psychologists	ISE	6	8	92929	17997
Biological science teachers, college and univ.	ISE	6	8	9651	16952
Medical science teachers, college and univ.	ISR	6	8	9014	32231
Chemistry teachers, college and univ.	ISE	6	8	8382	17021
Physics teachers, college and univ.	ISE	6	8	5414	18982
Agriculture and forestry teachers, college and univ.	ISE	6	8	3813	20216
Sociology teachers, college and univ.	ISE	6	8	3207	18228
Computer science teachers, college and univ.	ISE	6	8	2558	11567
Earth, environmental, and marine science teachers, college	ISE	6	8	2274	18635
Social science teachers, college and univ., n.e.c.	ISE	6	8	2009	15884
Natural science teachers, college and univ.	ISE	6	8	831	17073
Civil engineers	ISR	5	8	204035	24128
Actuaries	ISE	5	8	10319	27705

Investigative-Enterprising Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Computer systems analysts and scientists	IER	6	8	202651	22037
Architects	IEA	6	8	107693	22935
Mathematical science teachers, college and univ.	IES	6	8	16697	14266
Mathematical scientists, n.e.c.	IER	6	8	6401	25201
Examples:					
Algebraist					
Cryptographer					
Geometrician					
Harmonic analyst					
Weight control engineer					
Sociologist	IES	6	7	2550	18706
Examples:					
Criminologist					
Research worker, social welfare					
Pharmacists	IER	5	7	145637	19198

Investigative-Conventional Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Computer programmers	ICE	6	8	317677	16612
Examples:					
Business programmer					
Engineering programmer					
Management analysts	ICR	5	7	118581	24844
Examples:					
Business analyst					
Director of records management					
Manager, reports analysis					
Sales consultant					

Artistic Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Hand painting, coating, and decorating occupations	ARE	4	7	40915	10881
Clergy	ASE	6	8	283044	11893
Authors	AES	6	8	45748	14449
Designers	AES	5	7	338374	13777
Editors and reporters	AES	5	8	210831	14792
Painters, sculptors, craft-artists, and artist printmakers	AER	5	8	153162	11162
Musicians and composers	AES	5	8	140556	9553
Actors and directors	AES	5	7	67180	21424
Artists, performers, and related workers, n.e.c.	AES	5	7	49653	11333
Photographers	AER	4	7	94762	12526
Dancers	AER	4	7	13194	8092
Auctioneers	AES	3	6	6942	19375

Social-Realistic Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Physical education teachers, college and univ.	SRC	6	8	9008	12423
Radiologic technicians	SRI	5	6	96311	11547
Occupational therapists	SRE	5	7	17756	11246
Health aides, except nursing	SRI	4	6	292049	7230
Athletes	SRC	4	8	52802	13876
Furniture and wood finishers	SRE	4	7	31958	8322

Social-Realistic Occupations (Cont'd)

Title	Code	GED	SVP	N Employed	Mean earnings
Nursing aides, orderlies	SRE	3	4	1378118	6698
Mail carriers, postal service	SRC	3	4	260574	17100
Mail carriers, exc. postal service	SRC	3	4	179200	8191

Social-Investigative Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Speech therapists	SIE	6	7	41296	11992
Health specialties teachers	SIE	6	8	19551	14476
Social scientist, n.e.c.	SIE	6	8	13477	15189
Foreign language teachers, college and univ.	SIE	6	8	9954	10817
Psychology teachers, college and univ.	SIE	6	8	5820	20084
Economics teachers, college and univ.	SIE	6	8	5032	21485
Registered nurses	SIE	5	7	1285299	11949
Dietitians	SIE	5	7	67270	10570
Inhalation therapists	SIE	5	7	48738	10871
Physical therapists	SIE	5	7	43075	13659
Therapists, n.e.c.	SIE	5	7	43068	10525

Social-Artistic Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Theology teachers, college and univ.	SAE	6	8	3576	16025
Examples:					
Teacher, Church history					
Teacher, metaphysics					
Teacher, philosophy					
Teacher, religion					

Social-Enterprising Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Postsecondary teachers, subject not specified	SEI	6	8	425537	17497
English teachers, college and univ.	SEA	6	8	23403	12820
Business, commerce, and marketing teachers, coll. & univ.	SEI	6	8	7616	15993

Social-Enterprising Occupations (Cont'd)

Title	Code	GED	SVP	N Employed	Mean earnings
History teachers, college and univ.	SEI	6	8	5600	18546
Law teachers, college and univ.	SEI	6	8	4112	30134
Teachers, postsecondary, n.e.c.	SEI	6	8	3967	15579
Education teachers, college and univ.	SEI	6	8	2308	18243
Political science teachers, college and univ.	SEI	6	8	2066	19042
Home economics teachers, college and univ.	SEI	6	8	1987	12991
Social work teachers, college and univ.	SEI	6	8	810	18160
Teachers, elementary school	SEC	5	7	2319370	12589
Teachers, secondary school	SEC	5	7	860806	13632
Social workers	SEA	5	7	459984	12203
Personnel, training and labor relations specialists	SEC	5	7	422819	17143
Administrators, education and related fields	SEA	5	9	387538	19952
Teachers, n.e.c.	SEC	5	7	325788	9358
Administrators and officials, public administration	SER	5	8	295983	19755
Counselors, educational and vocational	SER	5	7	198256	13746
Librarians	SEC	5	7	187379	10795
Managers, medicine and health	SEI	5	8	110881	20081
Religious workers, n.e.c.	SEC	5	7	49744	8272
Teachers, special education	SEC	5	7	32818	11098
Administrators, protective services	SER	5	8	26237	18786
Hairdressers and cosmetologists	SEA	4	6	559254	7089
Licensed practical nurses	SEC	4	6	435176	8367
Teachers	SEC	4	4	215709	4333
Teachers, prekindergarten and kindergarten	SEC	4	7	183338	5922
Insurance adjusters, examiners, and investigators	SEC	4	7	167058	12820
Supervisors, financial records processing	SEC	4	7	159902	18356
Air traffic controllers	SER	4	8	41043	23450
Child care workers, except private household.	SER	3	3	612666	3881
Child care workers, private household	SEC	3	3	159915	2464
Correctional institution officers	SER	3	4	89295	13276
Protective service occupations, n.e.c.	SER	2	3	38739	5404

Social-Conventional Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Economists (IAS)	SCI	5	7	95565	24186
Legal assistants	SCE	5	7	79187	11546
Examples:					
Contract clerk					
Legal investigator					

Social-Conventional Occupations (Cont'd)

Title	Code	GED	SVP	N Employed	Mean earnings
Lien searcher					
Para-legal assistant					
Title abstracter					
Computer operators (ISC)	SCE	4	6	395547	11488
Chief communications operators	SCE	4	5	67205	22796
Examples:					
Communication-center coordinator					
Control-board operator					
Supervisor, information					
Supervisor, telephone operators, clerical					
Eligibility clerks, social welfare	SCE	4	6	24718	10570

Enterprising-Realistic Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Trade and industrial teachers, college and univ.	ERS	5	7	3595	15478
Supervisors, police and detectives	ERS	4	7	51306	21455
Dental hygienists (SAI)	ERC	4	6	46192	10451
Supervisors, material moving equipment operators	ERS	4	7	30670	19552
Fire inspection and fire prevention occupations	ERS	4	6	22634	15076
Supervisors, painters, paperhangers, and plasterers	ERS	4	7	10816	18058
Supervisors, forestry and logging workers	ERS	4	7	8662	18852
Bartenders	ERC	2	2	318425	7108
Baggage porters and bellhops	ERS	2	2	21490	8400

Enterprising-Investigative Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Industrial engineers	EIR	5	7	194322	21252
Examples:					
Efficiency analyst					
Production scheduler					
Quality control engineer					
Tool planner					
Sales engineers	EIR	5	8	44069	26932

Enterprising-Artistic Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Art, drama, and music teachers, college and univ.	EAS	6	8	28385	12982
Examples:					
Band director					
Dancing teacher					
Dramatic coach					
Photography teacher					
Voice teacher					
Public relations specialists	EAS	5	7	120037	17097
Examples:					
Director of public information					
Lobbyist					
Press agent					
Promotion manager					
Publicity agent					
Sales workers, shoes	EAS	4	3	115942	6531

Enterprising-Social Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Lawyers	ESA	6	8	501834	34600
Chief executives and general administrators, public admin.	ESA	6	8	35777	17460
Judges	ESA	6	9	27845	31107
Legislators	ESA	6	8	10669	20451
Managers and administrators, n.e.c.	ESR	5	8	5232507	23411
Supervisors and proprieters, sales occupations	ESA	5	8	1582537	16804
Sales representatives, mining, manufacturing, and wholesale	ESA	5	7	1257177	20175
Managers, marketing, advertising, and public relations	ESA	5	8	688875	25790
Real estate sales occupations	ESR	5	8	658375	18183
Financial managers	ESR	5	8	409844	22773
Other financial officers	ESC	5	7	405951	18380
Personnel and labor relations managers	ESA	5	8	219945	20899
Managers, properties and real estate	ESR	5	8	200072	15331
Managers, farms, except horticultural	ESR	5	8	140579	16232
Securities and financial services sales occupations	ESA	5	6	132388	32401
Purchasing manager	ESA	5	8	71199	23402
Announcers	ESR	5	6	46986	12341
Supervisors, computer equipment operators	ESI	5	7	42627	20521
Management related occupations, n.e.c.	ESR	5	8	31125	17922
Business and promotion agents	ESA	5	7	20607	18059
Purchasing agents and buyers, farm products	ESI	5	7	19480	18562
Urban planners (IRE)	ESR	5	8	13337	18749

Enterprising-Social Occupations (Cont'd)

Title	Code	GED	SVP	N Employed	Mean earnings
Sales workers, other commodities	ESA	4	4	1698385	6753
Supervisors, general office	ESC	4	7	645329	15423
Insurance sales occupations	ESR	4	6	567864	21232
Sales workers, apparel	ESA	4	4	442772	5600
Sales occupations, other business services	ESA	4	6	373546	16634
Sales workers, motor vehicles and boats	ESA	4	5	283108	15830
Production coordinators	ESR	4	6	265337	13776
Investigators and adjusters, except insurance	ESR	4	5	251197	12885
Supervisors, food preparation and service occupations	ESR	4	6	247781	8829
Sales workers, parts	ESC	4	6	198174	12982
Sales workers, hardware and building supplies	ESA	4	5	194264	10648
Purchasing agents and buyers, n.e.c.	ESA	4	7	191748	17185
Buyers, wholesale and retail trade, except farm products	ESA	4	6	167831	16005
Dental assistants (SAI)	ESC	4	6	158117	6652
Sales workers, furniture and home furnishings	ESA	4	4	150042	11613
Supervisors, cleaning and building service workers	ESR	4	7	116819	12646
Sales workers, radio, television, hi-fi, and appliances	ESA	4	4	115326	11160
Advertising and related sales occupations	ESR	4	6	114209	16788
Bill and account collectors	ESC	4	4	88524	9935
Public transportation attendants	ESR	4	7	69921	14192
Railroad conductors and yardmasters	ESR	4	6	47294	24122
Funeral directors	ESR	4	7	40296	19014
Recreation workers	ESC	4	3	37400	7549
Supervisors, motor vehicle operators	ESR	4	7	32649	17893
Postmasters and mail superintendents	ESR	4	7	31363	18576
Supervisors, firefighting and fire prevention occupations	ESR	4	7	20859	22392
Supervisors, handlers, equip. cleaners, & laborers, n.e.c.	ESR	4	7	10220	17402
Waiters and waitresses	ESC	3	3	1506093	4374
Guards and police, exc. public service	ESC	3	3	576994	9749
Police and detectives, public service	ESR	3	6	415769	17518
Street and door-to-door sales workers	ESC	3	3	222709	6058
Driver-sales workers	ESR	3	3	184808	14284
Personal service occupations, n.e.c.	ESR	3	3	183172	6191
Barbers	ESR	3	6	105460	10044
Dispatchers	ESC	3	5	98992	14582
Housekeepers and butlers	ESR	3	6	69020	3854
Sheriffs, bailiffs, and other law enforcement officers	ESR	3	5	62615	14282
Welfare service aids	ESA	3	4	60805	5984
Supervisors, personal service occupations	ESC	3	5	29000	12754
Guides	ESC	3	3	28011	6792
Supervisors, guards	ESR	3	6	24016	15513
Demonstrators, promoters and models, sales	ESC	3	3	12730	5945
Sales support occupations, n.e.c.	ESR	3	2	8205	12006
News vendors	ESC	2	2	106800	7208
Crossing guards	ESC	2	2	46582	3584

Enterprising-Conventional Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Supervisors, distribution, scheduling, and adjusting clerks	ECS	4	6	163110	17287
Interviewers	ECS	4	3	148898	7076
Examples:					
Canvasser					
Credit / Loan clerk					
Hospital admitting clerk					
Radio program checker					
Survey interviewer					
Postal clerks, exc. mail carriers	ECS	3	4	273152	16614
Hotel clerks	ECS	3	4	66382	5953
Food counter, fountain and related occupations	ECR	2	2	211965	3848
Examples:					
Carry-out clerk					
Counter waiter / waitress					
Runner, food order delivery					
Soda jerk					
Tray-line worker					

Conventional-Realistic Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Cost and rate clerks	CRS	4	5	88998	11494
Payroll and timekeeping clerks	CRS	3	4	165849	10484
Statistical clerks	CRS	3	4	143552	10923
Billing, posting, and calculating machine operators	CRS	3	4	54011	7919
Material recording, scheduling, and distributing clerks	CRS	3	3	40374	8858
Office machine operators, n.e.c.	CRS	3	4	34935	7847
Graders and sorters, agricultural products	CRE	3	4	20899	4697
Inspectors, testers, and graders	CRE	2	3	101389	15096
Weighers, measurers, and checkers	CRE	2	4	78057	11719
Parking lot attendants	CRS	2	2	36809	6685
Hand cutting and trimming occupations	CRE	2	2	17984	9435
Production samplers and weighers	CRE	2	2	9561	10737
Nailing and tacking machine operators, woodworking	CRE	2	2	4744	7456

Conventional-Social Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Underwriters	CSE	5	7	18597	15703
Health record technologists and technicians	CSE	5	6	15147	10960
Secretaries	CSE	4	6	3999222	8683
Bookkeepers, accounting, and auditing clerks	CSR	4	5	1895473	8915
Bank tellers	CSE	4	5	509449	6950
Data-entry keyers	CSR	4	4	394815	8744
Expediters	CSE	4	4	110341	11700
Transportation ticket and reservation agents	CSE	4	5	102949	14585
Sales counter clerks	CSE	4	5	95905	7032
Personnel clerks, except payroll and timekeeping	CSE	4	4	77639	9738
Proofreaders	CSI	4	5	28945	8348
Peripheral equipment operator	CSR	4	6	25034	10765
Cashiers	CSE	3	3	1875840	5953
General office clerks	CSE	3	2	1736613	8386
Typists	CSE	3	3	740049	7109
Receptionists	CSE	3	5	548160	6280
Telephone operators	CSE	3	3	306360	8824
File clerks	CSR	3	4	301282	7296
Library clerks	CSE	3	4	146761	4993
Billing clerks	CSE	3	5	135067	8886
Records clerks	CSR	3	3	131953	8926
Crane and tower operators	CSE	3	5	131373	18279
Stenographers	CSE	3	5	87629	12072
Meter readers	CSE	3	4	42634	12288
Communications equipment operators, n.e.c.	CSE	3	5	9566	7232

Conventional-Enterprising Occupations

Title	Code	GED	SVP	N Employed	Mean earnings
Accountants and auditors	CER	5	8	1012857	17803
Administrative support occupations, n.e.c.	CER	4	4	415896	11689
Information clerks	CES	4	2	87939	7873
Ship captains and mates, except fishing boats	CER	4	7	33411	22665
Telegraphers	CER	4	4	7989	15733
Order clerks	CES	3	4	325915	10529
Classified-ad clerks	CES	3	5	14351	9620
Messengers	CES	2	2	89416	7084
Ushers	CES	2	2	24034	4740